

PROJECT INFORMATION PACKAGE

REVERSE LINKAGE PROJECT BETWEEN BANGLADESH AND TURKEY FOR ENHANCING THE CAPACITY IN COTTON VARIETIES DEVELOPMENT

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ABBREVIATIONS & ACRONYMS

CDB	Cotton Development Board of Bangladesh
CGO	Country Gateway Office
CRI	Cotton Research Institute of Turkey
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GoB	Government of Bangladesh
GoT	Government of Turkey
HQ	Head Quarter
IT	Information Technology
MC	Member Country
MOU	Memorandum of Understanding
OIC	Organization of Islamic Cooperation
RL	Reverse Linkage
SESRIC	Statistical, Economic and Social Research and Training Center of Islamic Countries
THY	Turkish Airlines
TIKA	Turkish Coordination and Cooperation Agency
YTB	The Presidency of Turks Abroad and Related Communities

REVERSE LINKAGE PROJECT BETWEEN BANGLADESH AND TURKEY ON ENHANCING THE CAPACITY IN COTTON VARIETIES DEVELOPMENT

I. INTRODUCTION

1. Textile is the largest industrial sector in Bangladesh, but 97% of cotton is imported from international market and only 3% is locally produced. For increasing the revenues generated by the textile sector, the Government of Bangladesh (GoB) is keen to increase local cotton production without affecting the land used for food crops. Accordingly, the GoB envisages to produce cotton in less productive agricultural lands, which necessitates the development of new cotton varieties.
2. In Bangladesh, the Cotton Development Board (CDB) which was established 1972 under the Ministry of Agriculture of Bangladesh, is responsible for cotton related activities including research and development. The CDB has relatively good physical infrastructure and sufficient number of technical staff. Its major challenge is limited of knowledge and skills in advanced cotton research so as to generate new cotton varieties which are appropriate for the agro-ecological conditions of the country.
3. In this context, the GoB requested the Bank's support to enhance the capacity of CDB in cotton research through Reverse Linkage by sharing know-how and expertise from Cotton Research Institute (CRI) of Turkey. To this effect, the IsDB Governor's Office (Bangladesh) submitted an official request in April 2016 (Annex 1).
4. Accordingly, the IsDB approached CRI through the Ministry of Food, Agriculture and Livestock of Turkey to be a provider institution. The CRI, with its long and relevant expertise, is among the best institutions in cotton research in Turkey; and it has been identified as a Resource Center through the mapping exercise of Turkey's Resource Centers.
5. Subsequently, IsDB initiated a peer-to-peer process involving Bangladesh and Turkey in order to formulate Reverse Linkage intervention. In this exercise involved Turkish Coordination and Cooperation Agency (TIKA) and Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC) which signed a Memorandum of Understanding (MoU) in June 2014, whereby it was agreed to tap on the Turkish expertise in various fields to build the capacity of the IsDB Member Countries through Reverse Linkage.
6. In September 2016, a validation mission was mounted to Bangladesh by four experts from CRI of Turkey and a representative from IsDB, TIKA and Turkish Airlines to engage into discussion with the project stakeholders. This mission analyzed current situation of CDB and prepared an action plan to improve the capacity of CDB with respect to developing improved cotton varieties.
7. It is worthy noting that since the validation mission continuous communication took place among the various stakeholders to fine tune the proposed solution, and CDB in March 2018 reconfirmed their needs for the project.

II. CONTEXT

Country Context

8. Bangladesh, a South Asian country, with an area of 147,570 km², is bounded by India in the West, North, East, the Bay of Bengal in the South and Myanmar in the Southeast (Annex 2). Over 200 rivers and tributaries make the country a land of rivers. It is a deltaic plain divided into three zones including hills, terraces and flood plain.

9. The population of Bangladesh is around 164 million with growth rate 1.049%¹. Bangladesh is one of the most densely populated countries in the world with 1,265 people per square kilometer. According to the UNDP's Human Development Index², Bangladesh ranked 139th out of 188 countries.
10. Bangladesh is classified by the World Bank as a lower middle income developing country. In 2017, Gross Domestic Product (GDP) per capita was estimated at US\$ 1,516. GDP growth rate was 7.3 % in 2017 while inflation rate stayed low by 5.5%¹. Although more than half of GDP is generated through the service sector, agriculture and textile exports are the main engine of the Bangladesh's economy.

Agriculture Sector

11. Agriculture plays an important role in the overall economic development of Bangladesh. It is a crucial sector with respect to food and nutritional security, income generation, and poverty reduction. The agriculture sector directly employs 47.5%³ of labor force whilst 70%³ of the population depends on agriculture in one form or another for their livelihood. The share of the sector accounted for 13.4% of the GDP in 2017¹.
12. Bangladesh has a 14.75 million hectare total land, 59% of which (8.7 million ha.) is arable land and used for crop production. Around 67% of arable land is used for double and triple cropped area while 30% is used for single cropped area and only 3% of the arable land is left for fallow. Major crops being produced in the country are rice, potato, wheat, maize, pulses and in recent years jute and cotton.
13. Even though Bangladesh has succeeded in improving food sufficiency with relatively little arable land, structural issues remain in agriculture sector such as investing more in research on non-rice crops and livestock, raising productivity, introducing modern technology and improving agro-processing value chain.

Cotton Production in Bangladesh⁴

14. Cotton is one of the most important cash crops in Bangladesh and the main raw material of its textile industry, which in turn contributes significantly to the country's exports. Textile exports earning was US\$28.1 billion (82% of total exports earning) and accounted for 14.4% of Bangladesh's GDP in 2015. However, 97% of cotton is imported from international market and only 3% is locally produced.
15. The structure of cotton industry is shown in Figure 1, below. Bangladesh cotton value chain includes importers, farmers, ginning and processors, spinning mills, weaving and knitting industries, dyeing, finishing & garment manufacturing. The supply chain of locally produced cotton starts from the farm and passes through middleman, ginners and processors, CDB processing units to the spinning mills and by-product industries. About 15 registered ginneries working mostly in Southwestern region of the country play a vital role in domestic cotton supply chain. A few numbers of cotton by-product industries like-oil extraction plant, seed crusher, soap factory produce several products from cotton. On the other hand, the imported cotton is processed by spinners to produce thread and fabric which is, subsequently, consumed by the textile industry to produce textile products mainly for export purposes.

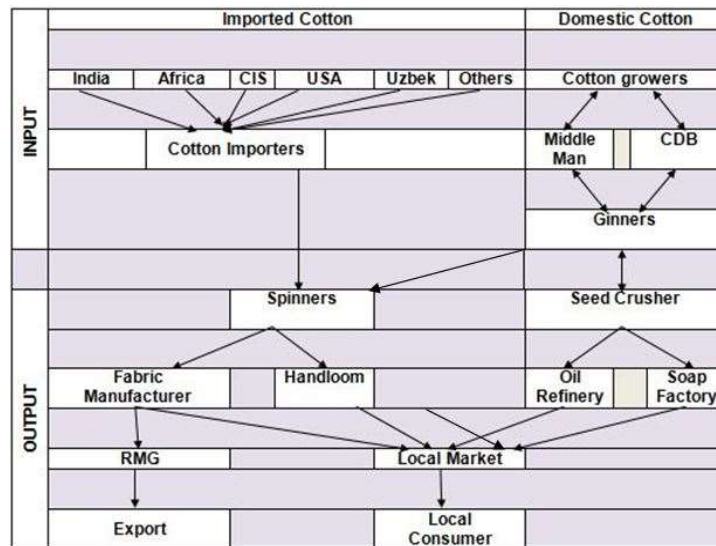
¹ World Bank Data (2017).

² The Human Development Report 2016 of UNDP.

³ Climate Change: Resilience in Bangladesh Cotton Production, 2016, CIHEAM.

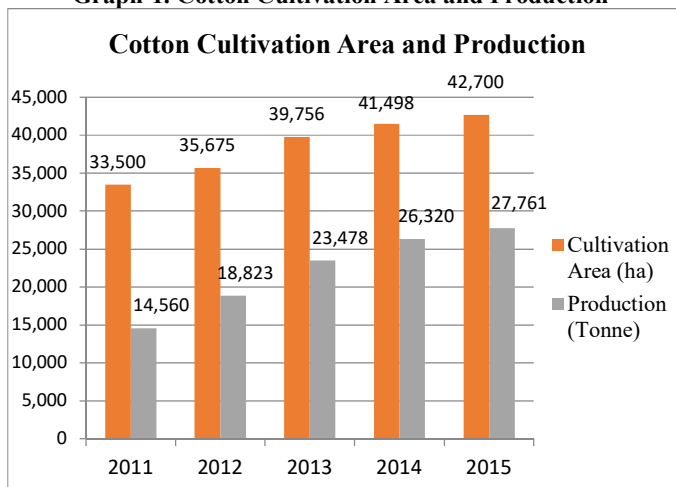
⁴ Source: Cotton Board of Bangladesh (CDB), 2015

Figure 1. The Structure of Cotton/Textile Industry in Bangladesh

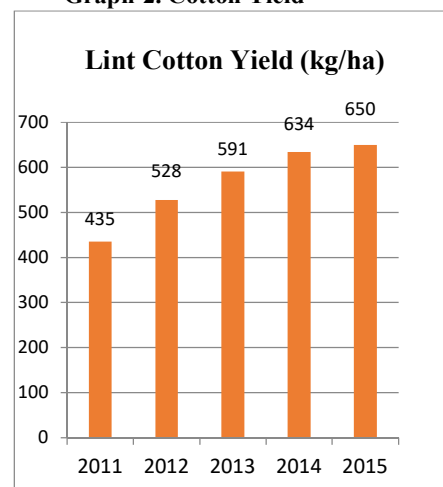


16. The cotton cultivation area, production and yield are illustrated on Graph-1 and Graph-2 respectively below. The two figures show significant increase in cotton production by years as a result of a steady increase in area under cotton production along with increase in yield, but not insufficient for meeting domestic cotton demand. Annual requirement of raw cotton for textile industry of Bangladesh is around one million tons. One of the challenges is that the farmers are reluctant to cultivate cotton due to its long maturation period of about 6 months. Therefore, a variety with a short duration of around 4.5 months will be acceptable to farmers to plant in conventional arable land. Another challenges is that current cotton varieties cultivated in Bangladesh are susceptible to insect attacks and diseases besides low lint cotton yield 650 kg/ha, which is lower than the world average of 788 kg/ha in 2016⁵.

Graph-1. Cotton Cultivation Area and Production



Graph-2. Cotton Yield



17. Two varieties are commonly used for cotton production in Bangladesh. The American Upland Cotton is grown in the floodplain, drought prone and coastal areas, while the Hill Cotton is grown as mixed crop in the hilly areas of Bangladesh.

18. The Government aims at utilizing less productive agricultural land for cotton production such where few crops can be grown. In the 7th Five Year Plan (2016-2020), it is clearly

⁵ International Cotton Advisory Committee

stated in that cotton production is required to be raised immediately in addition to increasing the research capacity of CDB. With that approach, cotton production will not affect the scarce agricultural land mostly used to grow food crops particularly rice, the staple food for the population.

Capacity Assessment

19. The CDB has two major mandates; research and development, and extension. Under research and development, CDB undertakes research in five disciplines, namely: breeding, agronomy, entomology, pathology and soil science. With respect to extension, CDB produces and distributes seeds, as well as transmits new varieties and techniques to farmers. The Turkish experts assessed the capacities of CDB in terms of human resources, research practices, and IT environment.

Human Resource and Research Practices

20. The CDB has sufficient human resources, including 354 technical staff and 291 administrative staff. The technical staff has academic background in agriculture, in general and cotton production, in particular; such as seed production, soil nutrition, water management, fiber technologies, seed cotton procurement and ginning (Annex. 3).
21. The CDB has been trying to develop several varieties while applying inadequate cotton production practices. CDB is not applying the most widely used Pedigree breeding methodology in cotton research. Rather, it has been implementing selection method to generate new varieties⁶. In other words, CDB is not implementing the Pedigree breeding methodology before introducing biotechnology into cotton breeding, as a supporting tool for breeding and assessing the characteristics of a plant through detailed and step by step genetic examination.
22. In addition, CDB has not been adopting proper land preparation, fertilization methods, harvest practices, and pest management for insects and diseases.

Research Infrastructure

23. The CDB's research infrastructure includes its laboratories, research and farm equipment and gene bank.
24. The CDB has two laboratories, including a bio-technology and fiber quality labs. The bio-technology laboratory was recently constructed and its equipment amounting to US\$756,000 were purchased in June 2016 from the national project entitled Cotton Gene Identification and Efficacy Determination Research Program. CDB has also renovated three more rooms as an extension of bio-technology lab in Gazipur Research Center.
25. The fiber quality laboratory is well-established, comprising High Volume Instrument (HVI) machine, and major equipment for fiber quality test. In addition, there is a Soil Resource Development Institute laboratory under the Ministry of Agriculture located nearby CDB Headquarters (HQs), where CDB conducts soil tests and analysis.
26. In addition to the two laboratories, the CDB has a gene bank in Rangpur Research Center possessing 520 germplasm.
27. The CDB is in the process of completing the renovation of its main building and procuring some additional farm and lab equipment, ginning machines and motorcycles under the

⁶ Pedigree breeding methodology is based on hybridization and improving a plant through progressively adding new characteristics over several generations. The Selection methodology does not involve hybridization, but improves a plant by progressively eliminating its less required characteristics over several generations.

Expansion of Cotton Cultivation Project. The GoB has provided US\$ 13 million to this project aims at transferring know-how and technology to farmers through extension services.

28. However, it was observed that CDB does not have raised bed planter machine in order to improve drainage for crop roots subjected to anaerobic conditions. The machine is not included in the above mentioned expansion project.

Information Technology (IT) Environment

29. The CDB's IT environment includes computer rooms in research centers and sub-centers (where complementary research activities are undertaken), computer laboratory (for training purposes) and generic IT infrastructure.
30. Computer rooms that are currently available for joint cotton development program are in old and ill condition and need to be renovated. The existing computers and other devices such as printers, overhead projectors are also obsolete and should be upgraded. The CDB does not have digital cameras for recording its research activities, in both research centers and sub-centers.
31. The CDB does not have well-established computer laboratory along with proper furniture and other support devices in HQs, for training of technical staff.
32. The CDB lacks fast and reliable internet connection, which is essential for undertaking research and development. The reasons are the following: (i) CDB is out of broadband area and entirely depends on mobile modem; and, (ii) CDB premises do not have adequate IT equipment. The CDB premises also lack proper furniture.
33. In conclusion, the major constraint of increasing domestic cotton production is lack of capacity to develop short-duration, high-yield cotton varieties that can be cultivated in various types of land including hilly, saline and charred areas. Solving this issue would help Bangladesh to increase its cotton production despite the scarcity of suitable land and without affecting the land used for food crops.
34. Producing the desired cotton varieties in Bangladesh requires long-term and intensive cotton research along with associated production practices. The existing research and production practices of the CDB are not sufficient to develop and deploy improved cotton varieties.
35. The CDB staff needs to focus on learning universally accepted cotton breeding methodology and best practices supported by biotechnological tools and techniques along with production practices that will enable the CDB to generate its own varieties in the long-term. In fact, it takes 8 to 10 years on average to develop a new cotton variety.

III. REVERSE LINKAGE PROJECT

Project Goal and Objective

36. The main objective of the project is to contribute to the efforts of the GoB to increase local cotton production particularly in less productive agricultural land. This will be achieved through enhancing the research capacity of CDB regarding cotton varieties development and improving its production practices.
37. The project's components are: (i) provision of long-term training on cotton research; (ii) provision of short-term training on production practices; (iii) joint development of enhanced cotton varieties; and, (iv) enhancement of research and IT environment.

Approach

38. To achieve the project's objectives, a Reverse Linkage approach with the following scheme is adopted:

- The Cotton Research Institute (CRI) of Turkey will be the main provider of expertise, in collaboration with the Izmir Institute of Technology, Adnan Menderes University, Ankara University, Çukurova University, and Hacı Bektaş Veli University;
- The Cotton Development Board (CDB) of Bangladesh is the recipient of the expertise. The GoB will contribute to the project with both cash and in-kind;
- The Government of Turkey (GoT), through TIKA, will be the primary donor of the project. Furthermore, the Presidency of Turks Abroad and Related Communities (YTB), Turkish Airlines (THY) and Ozaltın Inc. - a Turkish seed company - will contribute to the project from Turkey. The Statistical, Economic, and Social Research and Training Center of Islamic Countries (SESRIC) will also provide a financial contribution; and
- The IsDB will continue to undertake its connector role. It will facilitate the smooth implementation of the project by providing, among others, financial support.

Project Outcomes

39. After project completion, the CDB will have the theoretical and hands-on knowledge in cotton breeding and advanced production practices that will enable it to produce, in the long-term, improved cotton varieties that suit the agro-ecological conditions of Bangladesh.

Project Outputs

- Output-1: Knowledge of CDB staff in cotton research improved.
- Output-2: Skills of CDB staff in advanced production practices developed.
- Output-3: Knowledge of CDB staff in developing cotton varieties improved.
- Output-4: CDB's research and IT environment enhanced.

Project Key Indicators

For Output-1:

- 10 CDB staff are trained for one year each on cotton research, covering nine topics, in Turkish universities.

For Output-2:

- 65 CDB staff are trained on 13 different subjects through short-term courses, in CRI and Izmir Institute of Technology.

For Output-3:

- 10 previously developed and patented cotton varieties by CRI provided free of charge to the CDB.
- 25 CDB staff trained through 'Joint Cotton Varieties Development' in Bangladesh.
- 5 micro trials of the CRI's varieties conducted in each research center under agro-ecological conditions of Bangladesh.
- 5 macro adaptation trials of the CRI's varieties conducted in each research center.

For Output-4:

- 2 sets of raised bed planter machines procured and operationalized.
- Computer rooms in research centers and sub-centers renovated.

- 23 desktop computers and other necessary devices and furniture are procured and installed for research centers and sub-centers.
- 10 desktop computers and other necessary devices and furniture are purchased and installed for the computer laboratory in the CDB HQ.

Project Scope and Activities

40. An action plan was created for the project based around the following pillars:

- I. Long-term training on cotton research.
- II. Short-term training on production practices.
- III. Joint cotton varieties development.
- IV. Improving research and IT environment.
- V. Project management and monitoring.

➤ Pillar-1: Long-term Training on Cotton Research (In Turkey)

41. Under this pillar, 10 CDB staff will receive advanced training for one year each in Turkish universities on 9 various topics related to cotton research (one subject will be taken by 2 researchers).
42. The training topics are centered around producing improved cotton varieties; such as development of short duration cotton variety, high density planting system for increasing cotton yield, improvement of cotton genotypes resistance to insects, improvement of cotton genotypes resistance to disease, improvement of cotton genotypes resistance to drought, improvement of cotton fiber quality and response of cotton to salinity stress (Annex-4).

➤ Pillar-2: Short-term Training on Production Practices (In Turkey)

43. Under this pillar, 25 CDB staff in the first year, 20 in the second and 20 third year will participate in the short-term training courses in CRI and Izmir Institute of Technology. In total, 13 courses will be organized, with duration of a course ranging from one to three weeks.
44. The purpose of these courses is to provide hands-on experience on cotton production practices as well as to complement the knowledge gained through the above mentioned longer courses.
45. The training topics include, among others, cotton monitoring, crop management practices and harvest preparation, cotton biotechnology, pest and insect management, post-harvest processing and seed testing, environment and climate change (Annex-5).

➤ Pillar-3: Joint Cotton Varieties Development (In Bangladesh)

46. The CRI will provide 10 of its previously developed and patented cotton varieties free of charge to CDB for two purposes. Firstly, CDB will try the varieties in five affiliated research centers and determine whether these varieties are appropriate for agro-ecological conditions of Bangladesh. This will be conducted through first small-scale trial fields and if successful it will be tried in large field.
47. Secondly, both the CRI and CDB will conduct joint research programs in Bangladesh whereby the Turkish varieties will be crossed with 4 local varieties so as to produce new desired varieties for Bangladesh. This exercise will be undertaken by following a well-established cotton breeding method (i.e. Pedigree breeding methodology) that requires several selections and testing in natural environment.
48. The CRI will provide certain amount of seeds of these varieties to the CDB without patent rights. The names, the year of development and features of these cotton varieties are given in Annex 6. These varieties have mainly high yield and short duration characteristics that are

desired by cotton farmers in Bangladesh. Other characteristics include resistance to drought, certain diseases and insects, etc.

49. The CRI experts will travel to Bangladesh four times a year, one in sowing season of cotton seed (July), one in sample collection time (August), one in crossing time (September) and one in harvesting time of cotton (January). Each visit will comprise 12 days (8 working days) including weekend and travel days. Theoretical information will be provided in the first 2-3 days while practical application will be conducted for the rest of the time and 25 CDB technical staff are expected to participate in the joint research (Annex 7).

➤ **Pillar-4: Enhancing Research and IT Environment**

50. To strength the current research facilities of CDB, two sets of raised bed planter machine will be acquired and operationalized.
51. Computer rooms in 8 research centers will be renovated, prior to purchasing the necessary IT equipment and furniture for these centers.
52. *Providing IT equipment and furniture for research centers and sub-centers:* This activity covers purchasing and installing various IT equipment; 23 desktop computers, 8 laptops, 8 digital cameras, 8 color laser printers, 8 multimedia projectors along with furniture in CDB's research centers and sub-centers. IT equipment will be used in the computer rooms of these centers and sub-centers where complementary research activities are undertaken, such as recording and analyzing field data as well as producing statistics.
53. *Providing IT equipment and furniture for training computer laboratory:* This activity will help in establishing a training computer laboratory at CDB HQs in Dhaka. The activity covers purchasing and installing IT equipment - namely 10 desktops, 2 laptops, 1 color laser printer, 1 multimedia projector – and furniture. This laboratory will be used to organizing training programs for the benefit of CDB staff from research centers and sub-centers.
54. *Study Visit to Turkey:* Seven senior officials from Ministry of Agriculture and CDB will undertake a study visit to Turkey to be familiarized with the cotton research facilities and infrastructure of CRI and its management. This visit will enable the visitors to acquaint themselves with the Turkish expertise in agriculture in general and cotton research in particular. The study visit is the first component of the project implementation. Senior officials from Ministry of Agriculture and CDB will participate in a workshop that will convene all stakeholders in the project and update implementation plan before commencing the project implementation in the field.

➤ **Pillar 4: Project Management and Monitoring**

55. The day-to-day work of the project will be managed by two project coordinators appointed by the provider and recipient institutions each. Project coordinators will be performing their duties according to the Terms of References provided in Annex-8.
56. A Joint Coordination Committee (JCC) composed of representatives from all project stakeholders – including IsDB - will be established. The Committee will meet every eight months during project implementation (3 times) to make an assessment of the implementation and take corrective actions if needed. The JCC will meet for the last time at the closure of the project to evaluate the outcomes of the entire project (Annex-11)

Change Matrix

57. The table below is the Change Matrix that highlights the current situation before the proposed intervention and the targeted situation that the project aims to achieve.

Table 1. Matrix of Change

Components	Before (Reference situation)	After (Target Situation)
Long-term training on cotton research.	The CDB lacks of knowledge on good cotton breeding methodology.	The CDB has the critical knowledge on cotton breeding that enables it to develop improved cotton varieties relevant to Bangladesh.
Short-term training on production practices.	Limited knowledge on advanced cotton production practices.	The CDB masters advanced production practices which are essential for increasing cotton yield.
Joint cotton varieties development.	The CDB has no good starting point for cotton breeding and lacks the experience of crossing cotton varieties.	The CDB obtains ten Turkish cotton varieties for field trials in Bangladesh and crossing with domestic varieties.
Improving research and IT environment.	Obsolete conditions of IT equipment hinder the CDB's research activities.	The CDB's research is enabled by modern IT equipment.

Cost and Financing Plan

58. The estimated cost of the project is US\$ 1,019,770, to be financed through a grant, as shown in the following table (for detailed cost & financial commitment letters, see Annex-9 and 10).

Table-2: Project Financing Plan

Project Components	IsDB	TIKA	SESRIC	YTB	OZALTIN Ltd.	THY	GoB	Total
Long-term Training on Cotton Research		8,000		140,000		2,000		150,000
Short-term Training on Production Practices	150,750	52,000				13,000		215,750
Joint Cotton Varieties Development	36,000	41,600	74,000		16,000	10,400	209,420	387,420
Enhancing Research and IT Environment		125,300	20,090			1,960	16,000	163,350
Project Management and Monitoring	72,000		9,200			800		82,000
Base Cost								998,520
Contingences	21,250							21,250
Total	280,000	226,900	103,290	140,000	16,000	28,160	225,420	1,019,770
Percentage	27%	22%	10%	14%	2%	3%	22%	100%

59. With respect to the above project financing plan, it should be noted that:

- Turkish Airlines (THY) will be one of the project partners and make financial contribution of around US\$ 28,160, which is equivalent to discount on the flights to be taken during the project implementation.

- Ozaltın Inc., a Turkish seed producing company will contribute to the project US\$16,000 for per diems of Turkish experts. The firm has been closely working with CRI of Turkey and is willing to elaborate business opportunities in Bangladesh.
 - Government of Bangladesh as a recipient country will also make US\$225,423 financial contribution to the project. For Joint Cotton Development Program, CDB will hire 10 people for 3 years, pay daily allowances along with travel expenses for the staff coming from other provinces to join the project, buy training materials and inputs such as fertilizer, pesticide, etc. The cost of such items will be incurred by GoB.
60. It should be also noted that the following in-kind contributions are not reflected in the financing plan table:
- The CRI is expected to provide around US\$80,000 in kind contribution for internal transportation, subsidized accommodation and food, and other logistics items during 3 years implementation of the project. Moreover, 10 cotton varieties developed and patented by CRI of Turkey will be provided to CDB free of charge. Commercial value of a cotton variety is US\$50,000, totaling US\$500,000 for 10 varieties.
 - CDB will provide necessary logistics for Turkish experts coming to Bangladesh amounting to about US\$ 40,000. Likewise, renovation of main biotechnology laboratory amounting to US\$ 70,000 and three small rooms amounting to US\$53,000 will be covered by CDB.

IV. MAIN PARTNERS

The Cotton Research Institute (CRI) [Provider]

61. The CRI, a specialized institute on cotton research under General Directorate of Agricultural Research and Policies of the Ministry of Food, Agriculture and Livestock of Turkey, was established in 1934 in Aydın/Nazilli, Turkey. The mandate of CRI is to carry out national and international studies for producing new cotton varieties appropriate for agro-ecological conditions of Turkey, leading to increasing cotton productivity and yield. In this regard, it should be noted that Turkey is ranked 2nd in the world for lint cotton yield with 1,845 kg/ha preceded by Australia which has 2,196 kg/ha yield in 2015.
62. The CRI's specialties include cotton breeding, cotton agronomy, genetics and biotechnology, plant health, seed and cotton fiber quality. The main activities of CRI are collecting and evaluating data on cotton on a national scale; coordinating national cotton research activities; and conducting training and research activities in order to meet the quality and yield requirements of Turkey in cotton.
63. The CRI has 6 technical departments namely; Cotton Breeding & Genetics, Plant Growing Techniques, Plant Health, Production & Management, Fiber & Seed Technology and Agricultural Economics in addition to other departments such as Training & Extension, Accounting, Support Services, etc. Total number of CRI staff is 76, out of which 30 staff are technical experts.
64. The Institute has 4 administrative and technical buildings, 2 laboratories (Biotechnology, and Fiber Quality labs), 22 warehouses, 2 social facilities and a guest house as well as 114 hectare of land area. CRI, being involved in many national and international research activities, has developed and released 37 cotton varieties so far that have been provided to the cotton farmers.

Cotton Development Board (CDB) [Recipient Institution]

65. The Cotton Development Board (CDB) of Bangladesh was established in 1972 under the Ministry of Agriculture to promote cotton production in the country. The vision of the CDB is to increase the cotton production as well as its byproducts, thus reduce the import dependency of cotton. In order to increase domestic cotton production, the CDB undertakes the following activities: research on cotton, extension service, training & demonstration, seed production & distribution, and credit provision to farmers.
66. The CDB, which is managed by an Executive Director has two major wings; Research and Extension. It has 5 research centers and 3 sub-centers under research wing whilst it possesses 4 regional offices and 13 zonal offices under extension wing across the country. The CDB has currently 645 staff working in the mentioned centers and offices, out of which 354 are technical staff with agriculture education background. However, it has only 8 researchers specialized in cotton breeding and biotechnology.
67. CDB has carried out cotton research in 5 disciplines (Breeding, Agronomy, Entomology, Pathology and Soil Science) in 5 research centers and 3 research sub-centers located in different agro-ecological zones of Bangladesh. CDB has particularly focused its research activities on salinity, char, drought and hilly areas of Bangladesh where it plans to introduce new cotton varieties.

Turkish Cooperation and Coordination Agency (TIKA) [Donor]

68. TIKA, founded in 1992, aims to develop economic, commercial, technical, social, cultural and educational relations through projects, program and activities with designated states and communities.
69. TIKA, receiving its funds from the Turkish national budget, works closely with other governmental institutions (ministries and authorities) in the implementation of international cooperation projects. These institutions normally provide the experts for the execution of the projects while TIKA coordinates and finances the work.
70. Development cooperation at the country level goes through the Program Coordination Offices of TIKA in the respective partner countries (around 50 overseas offices as of March 2016). These offices are run by Turkish Program Coordinators. The rest of the personnel in the partner countries consist of local employees as well as Turkish experts who are assigned to work on-site in the short or medium term. In countries without a Coordination Office, the office that is geographically nearest is often used as a liaison office, or the projects are managed by Turkish embassies and consulates. New projects are normally either based on proposals from the Turkish Program Coordinators in the respective countries communicated via TIKA to the responsible specialized ministries or are brought to TIKA's attention by the specialized ministries or the Prime Ministry.

Statistical, Economic and Social Research and Training Center for Islamic Countries (SESRIC) [Donor]

71. The Statistical, Economic and Social Research and Training Center for Islamic Countries (SESRIC), was founded as a subsidiary organ of the Organization of Islamic Cooperation (OIC) in Ankara/Turkey in 1978. The mandate of the institution is as follows:
 - To collate, process and disseminate socio-economic statistics and information for the utilization of the OIC Member Countries;
 - To study and evaluate the economic and social developments in the Member Countries to help generate proposals that will initiate and enhance co-operation among them, and;

- To organize training programs in selected fields geared to the needs of the Member Countries as well as to the general objectives of the Organization of Islamic Cooperation.
72. The center is also a focal point for the technical co-operation activities and projects within the OIC system, a major research arm of the OIC whereby it is assigned the task of preparing the main economic and social reports and background documents for the multitude of economic, social and technical co-operation meetings and conferences held at different levels under the umbrella of the OIC every year.

The Presidency for Turks Abroad and Related Communities (YTB) [Donor]

73. YTB was established in April 2010 with an objective of strengthening relations between communities of Turkish background living abroad and the Republic of Turkey. YTB oversees the coordination among public institutions regarding Turkish citizens living abroad. It also manages the international scholarship program that is designed for international students to study in Turkish universities.
74. It is hosting students from many countries and provide them with support to complete their education. It also maintains a post-education relationships with graduated students.

Turkish Airlines (THY) [Donor]

75. Turkish Airlines, the national flag carrier of Turkey, is considered as one of the oldest airlines in the world as it began its journey in the year 1933 with only 5 aircrafts. Turkish Airlines flies a large number of destinations (291) and countries (116). With 20,000 employees around the world, THY has 335 aircrafts and has the youngest fleet in Europe.
76. Turkish Airlines started its operation in Bangladesh in December 2010 four times a week via Karachi. The route became quite popular within a short span of time. Therefore, a direct flight between Dhaka and Istanbul began daily operations from 2012.

OZALTIN Inc. [Donor]

77. Ozaltın Inc., established in 2000 in Aydın province of Turkey, is a company specialized in cotton seed. Since 2004, Ozaltın Inc. has been producing cotton seed with Bayer CropScience and exporting to several countries in addition to selling to the local market.
78. With 50 employees, 12 of whom are researchers, Ozaltın Inc. has been conducting research with a rich gene bank on developing new cotton varieties since its establishment. They developed three cotton varieties developed and patented them as a result of R&D activities.

V. IMPLEMENTATION ARRANGEMENTS

Implementation Schedule

79. The project will be implemented over a period of 36 month starting from the date of first disbursement. The detailed implementation schedule of the project is provided in Annex 11.

Procurement and Disbursement

80. The IsDB's financial contribution to the project will be disbursed as follows:
- Payment (advance and reimbursement) for the honoraria, per-diem, tickets and training activities will be directly disbursed to the accounts indicated by the providers and recipient of expertise.
81. The contribution of TIKA, SESRIC, THY, YTB and OZALTIN Inc will be disbursed as per internal rules and procedures.
82. The contribution of GoB will be disbursed as per their internal rules and procedures.

83. The procurement will be performed as follows:

- The equipment will be procured by TIKA according to their own rules and regulation.
- The training activities under the project will be provided by the Cotton Research Institute (CRI) of Turkey as the project’s technical partner in collaboration with the Izmir Institute of Technology, Adnan Menderes University, Ankara University, Çukurova University and Hacı Bektaş Veli University.

Sustainability

84. The following sustainability measures will be applied: retaining the trained staff through legal contract, maintaining the facilities and equipment through the annual budget of CDB and ensuring the continuation of CDB’s research through funding from GoB.

VI. RISKS

85. The following table summarizes the risks that could impact the project implementation and the measures taken to mitigate them:

Table 3. Risk Matrix

Risk	Likelihood	Description/Impact	Mitigation Strategy
Lack of ownership by Cotton Development Board (CDB) of Bangladesh	Low	CDB may lose focus and commitment during implementation of three years of the project.	The project has been designed to produce visible outputs (i.e. field trials of new cotton varieties) which will help in sustaining the buy-in of CDB.
Lack of coordination during the implementation period	Low	The large number of institutions involved in the project may create coordination issues, which may lead to implementation delays.	Close monitoring of the project through frequent Joint Coordination Committee (JCC) meetings and appointment of project coordinators from both provider and recipient institutions will reduce this risk.
Turkish cotton varieties do not suit Bangladeshi conditions	Medium	The CDB and CRI may face difficulties in adapting the Turkish varieties to the Bangladeshi conditions	The project is planning to try ten varieties, which will reduce this risk.
Loosing trained CDB staff	Medium	It may hinder to transfer expertise and know-how within CDB.	The project plans to train relatively large number of people. Furthermore, CDB should sign contracts with staff who will attend short and long term training programs in Turkey.

ANNEX 1. Official Request



Economic Relations Division
Ministry of Finance
Sher-e-Bangla Nagar
Dhaka-1207

D.O. No. 09.332.024.01.01.029.000.2009.105

Dated..... 20 April, 2016

Subject: Research Collaboration between the Cotton Development Board of Bangladesh (CDB) and Nazilli Cotton Research Institute of Turkey under Reverse Linkage Project of Islamic Development Bank (IDB)

Dear Brother Wosabi,

Assalamu Alaikum wa Rahmatullahi wa Barakatuh.

I am pleased to acknowledge with a fair degree of appreciation that the Reverse Linkage initiative of IDB has proved to be effective in fostering South-South cooperation and strategic partnership among the Member Countries through promoting knowledge sharing, technology transfer and cross border investments.

You may be aware that the Nazilli Cotton Research Institute, Ministry of Food Agriculture and Livestock, Republic of Turkey and Cotton Development Board of Bangladesh (CDB) are willing to create research collaboration under the Reverse Linkage Project of Islamic Development Bank (IDB). With a view to doing that, both the organizations have already conducted reciprocal visits and rendered joint efforts to prepare the 'Concept Note Proposal' in compliance with the IDB prescribed template. The proposed research collaboration envisages at establishing an advanced Cotton Biotechnology Laboratory in Bangladesh for extensive research works in order to introduce high yielding variety for increasing per hectare production and develop new genotypes tolerant to biotic stress. The project bears a great significance for Bangladesh as it aims at enhancing cotton production which can be very crucial to provide the backward linkage support to the country's leading export oriented Ready Made Garments (RMG) industries.

With reference to the letter from the Nazilli Cotton Research Institute, I am delighted to learn that IDB is contributing US\$ 300,000 for the implementation of the project in the form of grant. The letter also states that the Turkish Cooperation and Coordination Agency (TIKA) and Statistical, Economic and Social Research and Training Centre for Islamic Countries (SEISRIC) also may come forward to provide technical and financial assistance to the project.

In view of the above, you are requested to kindly do the needful in order to streamline the financing and ensure expeditious implementation of the project. I would like to end with the optimism that the collaborative effort will be marked as a joint step forward to regional cooperation, knowledge sharing and above all, to the cotton research and acceleration of cotton production in Bangladesh.

Attachment: 1. Reverse Linkage Concept Note Proposal
2. Letter of Nazilli Cotton Research Institute, Turkey

Yours Sincerely,


M. Humayun Kabir
Joint Secretary

Phone: +88-02-9119944

Brother Dr. Mohammed Wosabi
Senior Country Programs Manager
Country Programs Department,
Islamic Development Bank
P.O. Box 5925, Jeddah 21432, Saudi Arabi.

Copy for kind information and necessary action (Not According to Seniority)

1. Secretary, Ministry of Agriculture, Bangladesh Secretariat, Dhaka-1207 (Attn: Mr. Mahbulul Haque Patwary, Deputy Chief)
2. Executive Director, Cotton Development Board, 4th Floor, Rear Building, Khamarbari, Farmgate, Dhaka-1215 (Attn: Mr. Md. Akhtaruzzaman, Additional Director).
3. H.E.Sayed Aqa, VP, Cooperation and Capacity Development, Islamic Development Bank, P.O.Box.5925, Jeddah-21432, Kingdom of Saudi Arabia
4. Mr. Mehmet Fatih Serenli, Director for Training and Technical Cooperation, SESRIC, Ankara, Turkey.
5. Mr. Sadettin OZTURK, Director, Nazilli Cotton Research Station, Nazilli, Aydin, Turkey, (Atten: Mr. Mehmet Coban, Agriculture Engineer, Nazilli Cotton Research Station).
6. Gevher Ebru Cevikoglu, Deputy Coordinator, TIKA, Road no-5, House no-8, Baridhara Diplomatic Zone, Dhaka, Bangladesh.
7. Dr. Abdul Momen Bhuiyan, Acting Representative, IDB Dhaka Office, IDB Dhaka (10th Floor), Sher-e-Bangla Nagar, Dhaka.

ANNEX 2. Map of Bangladesh



Annex 3. Existing Manpower of Cotton Development Board

Name of the Post	HQ	Regional Offices	Zonal Offices	Research Centers	Total Number of Staff
Executive Director	1				1
Additional Director	1				1
Chief Scientific officer					
Principal Scientific officer					
Deputy Director	1	4			5
Senior Seed Production Officer					
Senior Ginning officer					
Senior Scientific officer (Breeding)					
Senior Scientific officer (Botany)				1	1
Chief Cotton Development officer			12		12
Senior Scientific officer				4	4
Seed production specialist		3			3
Insect Pest specialist		3			3
Soil Nutrition and water Management Specialist		2			2
Cotton Agronomist				2	2
Cotton Development officer	3		20		23
Technical officer	1				1
Training officer					
Marketing Officer					
Seed Production Officer					
Scientific officer				9	9
Scientific officer (Agronomy)				1	1
Scientific officer (Breeding)				1	1
Scientific officer (Entomology)				1	1
Cotton Breeder				1	1
Assistant. Cotton Pathologist				1	1
Fibre technologist	1				1
Seed cotton procurement & ginning officer					
Asstt. Seed cotton procurement & ginning officer	1		6	1	8
Diploma in Agriculture	8	6	234	25	273
a) Cotton Unit Officer					
b) Senior Scientific Assistant					
c) Store Cum Fieldman					
d) Asst. Cotton Unit Officer					
e) Lab/Field Assistant					
f) Scientific Assistant					
Sub-Total =	17	18	272	47	354
(Technical Person)					

Administrative Staff (Assistant Director, Administrative Officer, Accounts Officer, Upper Divisional Assistant, Accountant, Computer Operator, Store Keeper etc.)	13	9	30	21	73
Support Staff (Vehicle Driver, Electrician, MLSS, Guard, Cleaner etc.)	26	19	116	57	218
Sub-Total =	39	28	146	78	291
(Administrative & Support Staff)					
Grand Total =	56	46	418	125	645

ANNEX 4. Long-Term Training on Researcher in Turkey

Name of the Research Programs	Research Venue	Number of People and Duration	Months
1. Development of short duration cotton variety	Turkey	1 (1 st year)	September-August
2. High Density Planting System (HDPS) for increasing cotton yield	Turkey	1 (1 st year)	September-August
3. Improvement of cotton genotypes resistance to insect	Turkey	2 (1 st year)	September-August
4. Improvement of cotton genotypes resistance to disease	Turkey	1 (2 nd year)	September-August
5. Improvement of cotton genotypes resistance to drought	Turkey	1 (2 nd year)	September-August
6. Improvement of cotton fiber quality	Turkey	1 (2 nd year)	September-August
7. Enhancing Nitrogen Use Efficiency for Cotton Crop	Turkey	1 (3 rd year)	September-August
8. Fertilization and Irrigation management of cotton	Turkey	1 (3 rd year)	September-August
9. Response of Cotton to salinity stress	Turkey	1 (3 rd year)	September-August

ANNEX 5. Short-Term Training Programs in Turkey

Name of the Program	Year 1			Year 2			Year 3			VENUE
	# of People	Days	Date	# of People	Days	Date	# of People	Days	Date	
Cotton Monitoring	5	15	SEP 2017							CRI of Turkey
Crop Management Practices and Harvest Preparation	5	15	OCT 2017							CRI of Turkey
Cotton Biotechnology, Environment and Climate Change	5	7	DEC 2017	5	7	DEC 2017	5	7	DEC 2017	CRI of Turkey
Biotechnological Tools and Techniques for Cotton	5	15	FEB 2018							Izmir Institute of Technology
Sustainable Agriculture & Organic Farming	5	15	MAR 2018							CRI of Turkey
Cotton Breeding				5	22	JUL 2018				CRI of Turkey and Adnan Menderes University
Pest and Insect Management				5	15	OCT 2018				CRI of Turkey
Biotechnological Tools and Techniques for Cotton				5	22	FEB 2019				Izmir Institute of Technology
Post Harvest Processing and Seed Testing							5	15	OCT 2019	CRI of Turkey
Biotechnological Tools and Techniques for Cotton							5	15	FEB 2020	Izmir Institute of Technology
Cotton Physiology							5	15	MAR 2020	CRI of Turkey

Annex 6. The Varieties Developed by CRI of Turkey

Name of Variety	Year of Development	Characteristic
GSN 12	2007	High Yield
ÖZBEK105	2012	Early Maturity
SEZENER76	2015	High Yield
NAZ 07	2015	High Yield, High Fiber Quantity
LODOS	2015	High Yield
POYRAZ	2015	High Yield
ÖZALTIN 404	2015	High Fiber Quality
ADN3	2015	Early Maturity
ES1	2016	High Yield
ES2	2016	High Yield

ANNEX 7. Joint Cotton Development Program in Bangladesh

Name of the Program	Year 1			Year 2			Year 3		
	# of CRI Experts	Days	Joint Research Activity Month	# of CRI Experts	Days	Joint Research Activity Month	# of CRI Experts	Days	Joint Research Activity Month
New Approaches in Cotton Agronomy - Sowing Experiments	4	12	JUL	4	12	JUL	4	12	JUL
Biotechnological Tools and Techniques for Cotton - Sample Collection Activities	3	12	AUG	3	12	AUG	3	12	AUG
Advanced Breeding in Cotton - Crossing Activities	4	12	SEP	4	12	SEP	4	12	SEP
Integrated Pest Management - Harvest of Experiments	3	12	JAN	3	12	JAN	3	12	JAN

ANNEX 8. Terms of References for Project Coordinators

Introduction

This document outlines the Terms of Reference for the Project Coordinators of the Reverse Linkage (RL) project between Turkey and Bangladesh for the capacity development of the Cotton Development Board of Bangladesh (CDB). The document lists the tasks that are expected to be performed by the Project Coordinators in order to fulfill the overall objectives, and expected outcomes of the project.

The Duties of the Project Coordinators

The main objective of the project coordinators is to ensure timely, well-coordinated, and on-budget completion of the RL project. The IDB, playing the role of a catalyst and facilitator of the project, will continue to provide the necessary support during project implementation and fulfill its obligations as per the project agreement. However, it should be stressed that, since RL is a technical cooperation mechanism that involves at least two countries (in this case, Turkey and Bangladesh) that are aiding each other to develop their capacities, the success of the project rests primarily on the close coordination and follow up of the provider and recipient institutions and their respective representatives.

It should also be highlighted that as a principle in RL projects of the IDB, the representative of the provider institution (in this case, Cotton Research Institute of Turkey) is the main project coordinator.

The following points define the duties of the project coordinators further:

- i. Carry out the activities in the implementation plan developed by all project stakeholders;
- ii. Establish close, continuous and direct communications between the provider and recipient institutions, as well as the funding partners;
- iii. Prepare monthly activity report whose template is given below outlining the activities that were completed within the month; identify any unexpected issues that arose and were resolved; and list any pending issues that need to be resolved through consultation with the funding partners. The activity reports should clearly show the outputs of the completed activities and benchmark them against the outputs that were listed in the approved project document;
- iv. Send the monthly activity reports to the funding partners through the provider institution. The project coordinators will prepare one report jointly that is signed by the main project coordinator. The report will be sent to the IDB through the relevant administrative office of the provider institution. This report will constitute the trigger for the monthly payments to the project coordinators (see Section 3);
- v. Prepare for and lead the periodic Joint Coordination Committee (JCC) meetings that will be held every year. The meetings will be prepared in coordination with the funding partners. According to the approved project document, there will be a total of 3 JCC meetings (once a year) for this project. The JCC will review the

progress of the project and resolve any issues that may have arisen during implementation. Any major adjustments to the project structure, the financing plan, or the action plan may be will be discussed and resolved during these annual meetings of the JCC.

Management Remuneration for Project Coordinators

It has been agreed in the project agreement that over a period of 36 months during project implementation:

- i. Each project coordinator will receive a monthly remuneration as specified in the approved project document;
- ii. The trigger for each monthly payment will be the monthly activity report (template attached);
- iii. The payments are limited to a period of 36 months from the start of project implementation. If the project encounters any delays due to unforeseen circumstances, adjustments to remuneration will not be made.

Activity Report of the Project Coordinators (Month/Year)

1. Summary of the Activities Completed During <Enter Month, Year>

In this section, kindly provide a brief summary of the activities that were undertaken during the month. The information should be brief, and reserve the details for subsequent sections of the report. Activities can include any component of the project, as well as any preparatory activity(ies) that may have been undertaken to prepare for the implementation of specific components.

2. Details of Activities Undertaken

In this section, please provide specific details of the activities that were completed during the month of the report. The details should include all the specifics of the “what”, “where”, “when”, and “who” of the activity. Here, the project coordinators should also indicate whether the activity has been completed, or is still ongoing. This can be done through a table, which should also include a column to list comments for each activity, as well as a column for next steps that will be undertaken to complete the activity. The table should also link the activities to the specific components of the project as indicated in the approved project document.

3. Delivered Outputs

In this section, please list the outputs that have been achieved as a result of undertaking the activities mentioned in this report.

4. Issues/Problems Faced During Implementation of Activities

Here, the project coordinators should list any issues or problems that were encountered during the implementation of the activities covered in the report. The resolutions to these problems should also be discussed in this section. Any issues that need to be highlighted for IDB’s attention can also be listed here.

<i>Daily Allowances</i>				59230						59230	
<i>Training Materials</i>				12307						12307	
<i>Labor</i>				96153						96153	
<i>Inputs (Fertilizer, Pesticides, etc.)</i>				10770						10770	
<i>Other Items (Consumables, travel expenses, stationery, etc.)</i>				30960						30960	
4- Enhancing Research and IT Environment				163350		125300	20090			1960	16000
Raised bed planter machine (2 sets)	6000	2		12000		12000					
Renovation of computer rooms in research centers and sub-centers	2000	8		16000							16000
IT equipment & furniture for research centers and sub-centers				81700		81700					
<i>Desktop with Accessories</i>	1500	23		34500		34500					
<i>Color Laser Printer</i>	1000	8		8000		8000					
<i>Digital Camera</i>	600	8		4800		4800					
<i>Laptop</i>	1300	8		10400		10400					
<i>Multimedia projector</i>	1000	8		8000		8000					
<i>Furniture</i>	16.000	Lump		16000		16000					
IT equipment & furniture for Training Computer Lab (HQ)				31600		31600					
<i>Desktop with Accessories</i>	1500	10		15000		15000					
<i>Laptop</i>	1300	2		2600		2600					
<i>Color Laser Printer</i>	1000	2		2000		2000					
<i>Multimedia projector</i>	1000	1		1000		1000					
<i>Furniture</i>	5000	Lump		5000		5000					
<i>Air Cooler</i>	1.000	6		6000		6000					

Study Visit to Turkey				22050			20090			1960	
<i>International Economy Ticket (Bangladesh-Turkey- Bangladesh)</i>	1000	7		7000			5600			1400	
<i>Internal Flight in Turkey (Ankara-Izmir-Istanbul)</i>	400	7		2800			2240			560	
<i>Per Diem</i>	250	7	7	12250			12250				
5- Project Management and Monitoring				82000	72000		9200			800	
Project Management				72000	72000						
<i>Management CRI</i>	1200	36		43200	43200						
<i>Management CDB</i>	800	36		28800	28800						
Monitoring and Evaluation				10000			9200			800	
<i>International Economy Ticket (Turkey -Bangladesh-Turkey)</i>	1000	4		4000			3200			800	
<i>Per Diem</i>	250	4	6	6000			6000				
Base Cost				998520							
Contingences				21250	21250						
TOTAL COST				1019770	280000	226900	103290	140000	16000	28160	225420
% Contribution of Stakeholders				100%	27%	22%	10%	14%	2%	3%	22%
					IDB	TİKA	SESRIC	YTB	ÖZALT IN LTD.	THY	GOB



REPUBLIC OF TURKEY
PRIME MINISTRY
TURKISH COOPERATION AND COORDINATION AGENCY
Department of External Affairs and Partnerships

Ankara, 7th February 2017

No: B.02.1.TİK.0.10.09.00/050/0144
Subject: Reverse Linkage Project in Bangladesh

Dear Mr. Rebai,

It is with my great pleasure to inform you that TİKA will consider supporting the Reverse Linkage Project between Bangladesh and Turkey for the Capacity Development of Cotton Board of Bangladesh on Improving Cotton Varieties in the form of a grant in-kind contribution on the basis of its legislation as it was agreed during the validation visit.

As a partner in this project, TİKA's contribution is expected to be disbursed as set out in the validation report:

- IT equipment, office furniture, air coolers and raised bed planter machine
- Most flight expenses of experts travelling between two countries

I am confident that this project will not only support the capacity development of Cotton Development Board of Bangladesh but also cotton sector and textile industry, which are crucial for Bangladesh's economic growth.

In conclusion, I would like to reiterate our will to work with all stakeholders in order to ensure this good initiative comes to fruition.

Yours sincerely,

Mehmet YILMAZ, Ph.D.
Head of Department

Mr. Zaher Rebai
Director
Capacity Development Department
Islamic Development Bank
Jeddah

No. OGL.TCD.2016/664

Ankara, 09 November 2016

H.E. Dr. Mansur Muhtar
Vice President, Sector Operations
Islamic Development Bank
Jeddah, Kingdom of Saudi Arabia

Subject: SESRIC Support for “Capacity Development of the Cotton Development Board (CDB) of Bangladesh” Under Reverse Linkage Program

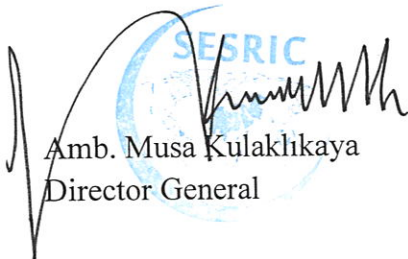
Dear Excellency,

Assalamu Alaikum wa Rahmatullahi wa Barakatuh,

It gives me a great pleasure to inform you that, based upon the discussion and consultations during the combined diagnostic and validation visit to Bangladesh and subsequent consultation with partner institutions with regard to the realisation of the project titled “Capacity Development of the Cotton Development Board (CDB) of Bangladesh”, SESRIC is willing to provide financial support for the above titled project with an estimate budget of \$103.290 USD to cover the relevant expenses for the training and technical cooperation activities during the three year lifespan of the project within the framework of the Memorandum of Understanding signed between SESRIC, IDB, and TIKA on 26 June 2014 concerning expanding their cooperation for enhancing the socio-economic development in OIC member countries.

Looking forward to enhanced collaboration between our institutions, please accept my profound regards.

With my warmest regards,



Amb. Musa Kulaklıkaya
Director General

B.02.2.THY.0.10.01.08 – **Obb**
Subject: Reverse Linkage Project

ANKARA
09.01.2017

Islamic Development Bank
Turkey Country Gateway Office
Kudüs Cad. No:9 Diplomatik Site
Oran/Ankara, Turkey

Dear Sir,

As you are aware, Turkish Airlines (THY), the national flag carrier of Turkey, is one the most popular airline in the global aviation industry and considered one of the oldest airlines in the world as it began its journey in the year 1933. THY has now 334 aircrafts and has the youngest fleet in Europe. THY has been chosen as "Best Airline in Europe" for the sixth consecutive years in the 2016 Skytrax World Airlines Awards.

We are pleased to get involved in the Reverse Linkage Project between Turkey and Bangladesh for the capacity development of Cotton Board of Bangladesh on Improving Cotton Varieties. IDB and other donors in the project have committed for generous financial contribution for the project. We believe that this project will also promote Turkish Airlines brand and routes between two countries.

Turkish Airlines hereby agrees to provide a %30 discount on net ticket fare subject to the availability of the flights at the time of request up to 145 tickets (not exceeding US\$28.160 in total) applicable to the flights operated by Turkish Airlines (excluding code-share flights) between 01.01.2017-31.12.2019. Turkish Airlines then, applicable to the General terms and Conditions shall apply to the baggage allowances, cancellation, refund or change requests. Islamic Development Bank Turkey Country Gateway Office shall provide the eligible names and ticket requests to Turkish Airlines Ankara Sales Office.

Yours Sincerely,

TURKISH AIRLINES INC.


Emrullah KIRIŞCI
Director



November 11, 2016

Islamic Development Bank
Turkey Country Gateway Office
Ankara, Turkey

Dear Sir,

Assalamu Alaykum Wa Rahmetullah

Özaltın Inc. is a private seed company located in Aydın province of Turkey. Since its establishment in 2000, it has been operating on cotton seed production including cotton research. In addition, it has been involved in producing vegetables and olive oil for local and international markets.

We are pleased to get involved in the Reverse Linkage project between Turkey and Bangladesh for the capacity development of Cotton Board of Bangladesh on Improving Cotton Varieties. IDB and other donors in the project have committed for generous financial contribution for the project. Özaltın Inc. hereby commits US\$16,000 for per diems of experts from Turkey under the mentioned project.

Yours Sincereley,

Kasım Külek ÖZ

Genel Müdür

**ÖZALTIN TARIM İŞLETMELERİ
SANAYİ VE TİCARET A.Ş.**
Koçarlı-Söke Asfaltı 3. km Dedeköy altı Koçarlı/AYDIN
Tel : 0.256 784 12 72 Fax : 0.256 784 12 69
Koçarlı Mahallesi/AYDIN 093 011 7768

ÖZALTIN TARIM İŞLETMELERİ SAN VE TİC A.Ş.
Koçarlı Söke asfaltı 3. km Dedeköy altı Koçarlı/AYDIN
Tel: 0 256 784 12 72 Fax: 0 256 784 12 69



Economic Relations Division
Ministry of Finance
Sher-e-Bangla Nagar
Dhaka-1207

D.O. No. 09.332.024.01:78:000:2016-254

Dated.....
23 October, 2016

Subject: Commitment of the Government of the People's Republic of Bangladesh for the Reverse Linkage Project between Cotton Research Institute of Turkey and Cotton Development Board (CDB) of Bangladesh .

Excellency,

Assalamu Alaikum Wa Rahmatullahi Wa Barakatuhu

I fondly recall with great satisfaction that the Islamic Development Bank (IDB) and the Government of Bangladesh have been enjoying excellent relations of development cooperation over the last four decades which is being cemented through growing interaction in various fields. I am pleased to note that the Reverse Linkage initiative of IDB has heralded a new horizon of South-South cooperation and strategic partnerships among the member countries through promoting knowledge sharing, technology transfer and cross border investments.

Your Excellency may be aware that the Cotton Research Institute, under the Ministry of Food Agriculture and Livestock, Republic of Turkey and Cotton Development Board of Bangladesh (CDB) have agreed to undertake a project on **Capacity Development of CDB on Improving Cotton Varieties** under the Reverse Linkage Initiative of IDB in which some other partners such as Turkish Cooperation and Coordination Agency (TİKA), Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), Presidency for Turks Abroad and Related Communities (YTB) and Turkish Airlines (THY) and a Turkish private seed company OZALTIN Inc are involved and committed to make grant contributions.

This is my pleasure to inform you that the Government of Bangladesh hereby commits US\$225,423 for the Joint Cotton Research Program in Bangladesh and renovation of computer labs at CDB research centers and sub-centers. The Government of Bangladesh appreciates the technical and financial supports of the esteemed institutions of Turkey and assures them of our firm commitment to meet the goals and objectives of the project.

Please Excellency, accept the assurances of our highest consideration.

Yours Sincerely

Mahmuda Begum

Additional Secretary

The Vice President,
Sector Operations
Islamic Development Bank
Jeddah, Saudi Arabia.

Copy for kind information and necessary action (Not According to Seniority)

1. Secretary, Ministry of Agriculture, Bangladesh Secretariat, Dhaka-1207 (Attn: Mr. Mahbulul Haque Patwary, Deputy Chief)
2. Executive Director, Cotton Development Board, 4th Floor, Rear Building, Khamarbari, Farmgate, Dhaka-1215 (Attn: Mr. Md. Akhtaruzzaman, Additional Director).
3. H.E.Sayed Aqa, VP, Cooperation and Capacity Development, Islamic Development Bank, P.O.Box.5925, Jeddah-21432, Kingdom of Saudi Arabia
4. Mr. Mehmet Fatih Serenli, Director for Training and Technical Cooperation, SESRIC, Ankara, Turkey.
5. Mr. Sadettin OZTURK, Director, Nazilli Cotton Research Station, Nazilli, Aydin, Turkey, (Atten: Mr. Mehmet Coban, Agriculture Engineer, Nazilli Cotton Research Station).



Government of the People's Republic of Bangladesh
Cotton Development Board
Office of the Executive Director
Khamarbari, Farmgate, Dhaka



No. CDB/Research collaboration-3/1039

Date: 25 July 2018

Subject: Confirmation of the Commitment of the Government of the People's Republic of Bangladesh for the Reverse Linkage Project between Cotton Research Institute of Turkey and Cotton Development Board (CDB) of Bangladesh

Reference: Economic Relations Division *D.O.* no. 09.332.024.01.78.000.2016-254, dated: 23 October 2016

Dear Sir,

Assalmu Alaikum Wa Rahmatullah Wa Barkatahu

I am expressing my deepest gratitude to you for your kind initiative to finalize our proposed Reverse Linkage Project between Cotton Research Institute of Turkey and Cotton Development Board (CDB) and for your kind conference call to us together with your Colleagues including Mr. Riad Ragueb, the Manager of Reverse Linkage Division. I am highly thankful to the Team Members of Combined Mission, who work very hard to identify the gaps in our cotton research and development as well as to develop this Project Proposal to overcome the identified gaps. Above all, we highly appreciate the kind support from IDB for our Cotton Research and Development through Reverse Linkage Project.

I do hereby confirm that the Commitment Letter of our Government of Bangladesh contribution US\$ 225,423 as stated by the Economic Relations Division *D.O.* letter no. 09.332.024.01.78.000.2016-254, dated on 23 October 2016 is valid until the completion of the proposed project.

We are looking forward for working with you.

Thank you very much.

Enclosure: ERD Letter

With best regards,


(Dr. Md. Farid Uddin)
Executive Director

Mr. Sameh Hussein
Reverse Linkage Section.
Islamic Development Bank (IsDB)

Attention: Mr. Riad Ragueb, the Manager of Reverse Linkage Division

টেলিফোন : অফিস - ৯১৩৪৭৭৮
ফ্যাক্স - ৫৮১৫২৭৫৮
ই-মেইল - ed@cdb.gov.bd

Telephone : Office - 9134778
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ANNEX 11. Detailed Implementation Plan

Project Components	Year 1											
	Q1 (Jul-Aug-Sep 2018)			Q2 (Oct-Nov-Dec 2018)			Q3 (Jan-Feb-Mar 2019)			Q4 (Apr-May-Jun 2019)		
	M1 2018	M2 2018	M3 2018	M12018	M2 2018	M3 2018	M12019	M2 2019	M3 2019	M1 2019	M2 2019	M3 2019
1- Long Term Training on Cotton Research (in Turkey)	Development of short duration cotton variety, High Density Planting System (HDPS) for increasing cotton yield, Improvement of cotton genotypes resistance to insect (one year program)											
2- Short-Term Training on Production Practices (in Turkey)			Cotton Monitoring 2 weeks, 5 people	Crop Management Practices and Harvest Preparation 2 weeks, 5 People		Cotton Biotechnology, Environment and Climate Change 1 week, 5 people		Biotechnological Tools and Techniques for Cotton 2 weeks, 5 people	Sustainable Agriculture and Organic Farming 2 weeks, 5 people			
3- Joint Cotton Varieties Development (in Bangladesh)	New Approaches in Cotton Agronomy Course - Sowing Experiments 10 days, 4 people	Biotechnological Tools and Techniques for Cotton Course - Sample Collection Activities 10 days, 3 people	Advanced Breeding in Cotton Course - Crossing Activities 10 days, 4 people				Integrated Pest Management Course - Harvest of Experiments 10 days, 3 people					
4- Enhancing Research and IT Environment												
4.1 Renovation of Computer Rooms in research centers and sub-centers												
4.2 Raised bed planter machine	Equipment procurement in coordination with TİKA											
4.3 Study Visit to Turkey	Study Visit to Turkey											
4.4 Procuring IT equipment for research centers and sub-centers										Equipment procurement in coordination with TİKA		
4.5 Procuring IT equipment for research Training Computer Lab (HQ)										Equipment procurement in coordination with TİKA		
5- Project Management and Monitoring												Project coordination meeting

Project Components	Year 2											
	Q1 (Jul-Aug-Sep 2019)			Q2 (Oct-Nov-Dec 2018)			Q3 (Jan-Feb-Mar 2019)			Q4 (Apr-May-Jun 2019)		
	M1 2019	M2 2019	M3 2019	M1 2019	M2 2019	M3 2019	M1 2020	M2 2020	M3 2020	M12020	M2 2020	M3 2020
1- Long Term Training on Cotton Research (in Turkey)	Improvement of cotton genotypes resistance to disease, Improvement of cotton genotypes resistance to drought, Improvement of cotton fiber quality											
2- Short-Term Training on Production Practices (in Turkey)	Cotton Breeding 3 weeks, 5 people			Pest and Insect Management 2 weeks, 5 people		Cotton Biotechnology, Environment and Climate Change 1 week, 5 people		Biotechnological Tools and Techniques for Cotton 3 weeks, 5 people				
3- Joint Cotton Varieties Development (in Bangladesh)	New Approaches in Cotton Agronomy Course - Sowing Experiments 10 days, 4 people	Biotechnological Tools and Techniques for Cotton Course - Sample Collection Activities 10 days, 3 people	Advanced Breeding in Cotton Course - Crossing Activities 10 days, 4 people				Integrated Pest Management Course - Harvest of Experiments 10 days, 3 people					
4- Enhancing Research and IT Environment												
4.1 Renovation of Computer Rooms in research centers and sub-centers												
4.2 Raised bed planter machine												
4.3 Study Visit to Turkey												
4.4 Procuring IT equipment for research centers and sub-centers	Equipment procurement in coordination with TİKA											
4.5 Procuring IT equipment for research Training Computer Lab (HQ)	Equipment procurement in coordination with TİKA											
5- Project Management and Monitoring												Project coordination meeting

Project Components	Year 3											
	Q1 (Jul-Aug-Sep 2020)			Q2 (Oct-Nov-Dec 2020)			Q3 (Jan-Feb-Mar 2021)			Q4 (Apr-May-Jun 2021)		
	M1 2020	M2 2020	M3 2020	M1 2020	M2 2020	M3 2020	M1 2021	M2 2021	M3 2021	M1 2021	M2 2021	M3 2021
1- Long Term Training on Cotton Research (in Turkey)	Enhancing Nitrogen Use Efficiency for Cotton Crop, Fertilization and Irrigation management of cotton, Response of Cotton to salinity stress											
2- Short-Term Training on Production Practices (in Turkey)				Post Harvest Processing and Seed Testing 2 weeks, 5 people		Cotton Biotechnology, Environment and Climate Change 1 week, 5 people		Biotechnological Tools and Techniques for Cotton 2 weeks, 5 people	Cotton Physiology 2 weeks, 5 people			
3- Joint Cotton Varieties Development (in Bangladesh)	New Approaches in Cotton Agronomy Course - Sowing Experiments 10 days, 4 people	Biotechnological Tools and Techniques for Cotton Course - Sample Collection Activities 10 days, 3 people	Advanced Breeding in Cotton Course - Crossing Activities 10 days, 4 people				Integrated Pest Management Course - Harvest of Experiments 10 days, 3 people					
4- Enhancing Research and IT Environment												
4.1 Renovation of Computer Rooms in research centers and sub-centers												
4.2 Raised bed planter machine												
4.3 Study Visit to Turkey												
4.4 Procuring IT equipment for research centers and sub-centers												
4.5 Procuring IT equipment for research Training Computer Lab (HQ)												
5- Project Management and Monitoring												Project coordination meeting